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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,192	03/14/2001	Pierre Gautier	PHFR 000027	3280

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EXAMINER

WONG, ALLEN C

ART UNIT PAPER NUMBER

2613

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/808,192

Applicant(s)

GAUTIER ET AL.

Examiner

Allen Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3,4,5/4/3 and 5/3 is/are allowed.
- 6) ☒ Claim(s) 1,2,5/2/1,5/1,6 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 4/5/04 have been fully read and considered but they are not persuasive.

Regarding lines 5-6 on page 6 of applicant's remarks, applicant states that the feature "defining a reserve of bits (ROBC) indicating a number of bits used for coding each frame is either greater or less than a predetermined number" is not anticipated by Okada et al. This is not true, because according to the statement made by applicant at lines 1-5 on page 6 of applicant's remarks, applicant concedes that Okada evidently teaches "defining a reserve of bits (ROBC) indicating a number of bits used for coding each frame is either greater or less than a predetermined number", as required by claim 1. Thus, Okada teaches the feature.

With regards to claims 2, 6, 7, 5/2/1 and 5/1, these claims are rejected for the same reasons as claim 1.

Claim Objections

Claim 3 is objected to because of the following informalities: the "total fixed bit budget" should be disclosed in the claim to clarify the acronym "TFBB". Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 5/2/1 and 5/1 are rejected under 35 U.S.C. 102(b) as being anticipated by Odaka et al. (5,317,397).

Regarding claims 1, 6 and 7, Odaka discloses a variable bitrate video encoding method comprising, for encoding a sequence of frames (col.15, ln.35-67, Odaka discloses the encoding of a group of frames, GOP, where a GOP has I (intracoded), P (predictive) and B (bi-directional) frames; that in col.16, ln.44-46, Odaka discloses the coding order of the respective pictures within a GOP and note fig.17 is a variable bit rate video coding apparatus and method), at least a quantization step of an input bitstream (col.17, ln.12-13 and fig.17, element 704), a coding step of said quantized bitstream (col.17, ln.15-16; fig.17, element 712 performs variable length encoding to the quantized bitstream), and a control step of the quantization step with respect to a buffer occupancy at the output of said coding step (col.17, ln.31-33, in fig.17, element 717 controls the quantizer 704 by adjusting the quantization step size with respect to the buffer occupancy of buffer 715 at the output of the coding step element 712), said method being characterized in that it also comprises an analysis step, for defining a reserve of bits indicating a number of bits used for coding each frame is either greater or less than a predetermined number (col.22, ln.48-57 and col.23, ln.9-45; Odaka discloses the analysis step where the parameters related to the input bitstream are updated at each picture or frame, the allocation of reserve bits are updated at each picture or frame for efficient coding of the picture data and that the virtual buffer is used for occupying the reserve bits and help prepare the proper application of the amount of

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bits needed for each picture by changing the quantization step size; and in col.23, ln.34-45, Okada disclose defining a reserve of bits (ROBC) indicating a number of bits used for coding each frame is either greater or less than a predetermined number), and an additional control step, for maintaining, increasing or decreasing the quantization step value according to the state of said reserve of bits (col.28, ln.6-14; Odaka discloses increasing the quantization step size if the buffer content is larger than the threshold (bit budget), ie. reserve of bits is negative, so that the bit rate is reduced, and Odaka discloses decreasing the quantization step size if the buffer content is smaller than the threshold (bit budget), ie. reserve of bits is positive, so that the bit rate is increased to spend more bits; thus, Odaka checks the status of the reserve of bits to determine if the quantization step size needs to be modified, and if the reserve bits is zero or if the buffer content is equal to the threshold, then the quantization step size is not changed, ie. maintained; thus, Odaka discloses that buffer underflow and/or overflow conditions can be monitored and properly controlled).

Regarding claim 2, Odaka discloses an encoding method according to claim 1, characterized in that the quantization step value is modified only if said reserve of bits reaches critical values (col.28, ln.6-14; Odaka discloses increasing the quantization step size if the buffer content is larger than the threshold (bit budget), ie. reserve of bits is negative, so that the bit rate is reduced, and Odaka discloses decreasing the quantization step size if the buffer content is smaller than the threshold (bit budget), ie. reserve of bits is positive, so that the bit rate is increased to spend more bits; so thus, Odaka checks the status of the reserve of bits to determine if the quantization step size

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needs to be modified during critical conditions, such as the buffer underflow and overflow).

Regarding claims 5/2/1 and 5/1, Odaka discloses an encoding device to implement an encoding method (fig.17 is an encoding apparatus or device that implements the encoding method). Thus, claims 5/2/1 and 5/1 are rejected for the same reasons as claim 1.

Allowable Subject Matter

3. Claims 3-4, 5/3 and 5/4/3 are allowed over the prior art.

4. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose, teach or suggest the specifics of claim 3, where claim 3 discloses various relations of the ROBC (reserve of bits), the variations of the initial quantization step value, and threshold values. And since the applicant has rewritten claim 3 into an independent form along with its intervening limitations, claim 3 is deemed allowable.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

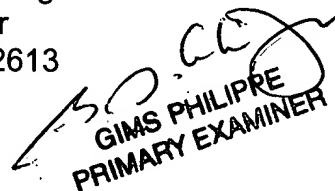
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (703) 306-5978. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Allen Wong
Examiner
Art Unit 2613

AW
6/23/04


GIMS PHILIPRE
PRIMARY EXAMINER